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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,377	04/12/2000	Satoko Tonegawa	13458 (JP9 1999-0060)	5409

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EXAMINER

MILLER, MARTIN E

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 05/28/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/548,377

Applicant(s)

TONEGAWA ET AL.

Examiner

Martin Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the instant Application filed on April 12,

2000. Information Disclosure Statement

2. The examiner has considered the IDS filed April 12, 2000 and an initialed copy is included with this office action. The examiner notes that applicant cites WO 98/116928 (p. 1, l. 24) as pertaining to alteration detection, but fails to provide a copy of such document. The examiner attempted to find this document in the PTO electronic database, but was unable to do so. It is respectfully requested that applicant confirm the serial number and provide a copy.

Specification

3. The disclosure is objected to because of the following informalities: there are numerous occurrences of the following: the word "extrDCTed" (p. 3, ll. 14-19, 32, etc.) should be --extracted-- . Also, on p. 2, ll. 14-17, the "hush function" should probably be the --hash function--.

Appropriate correction is required.

Drawings

4. The Examiner accepts the formal drawings filed August 13, 2002, which have been made of record.

Claim Rejections - 35 USC § 112

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5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 1, 2, 16, 17, 19 all contain the parenthetical with the term "second embedding data". It is not definite as to what this language refers or how it limits the claim.

Claims 17-19 recite a combination of what appears to be apparatus limitations (a medium in an alteration detection apparatus...) and method limitations said medium carrying a program for having a computer exercise the steps of:....) as a result it is indefinite as to whether applicant is claiming an apparatus or method.

Claims 4, 11, and 14 recite "in the case that alteration was added to any of said second image blocks, said mutually corresponding plurality of unit data values contained in each of said second image blocks to which alteration was added are adjusted so that said values do not comply with said certain rule", however, independent claims 2, 9 and 12 have the alteration detection means operating after the data filling means without returning to the data filling means after alteration detection. So how is it determined that data is altered prior to data filling? The Examiner is going to interpret this claim to limit alteration detection means by indicating an alteration when said second data blocks do not have data that matches the certain embedded data that was embedded according to the certain rule.

Claim Rejections - 35 USC § 102

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8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Adler et al., (hereinafter Adler), US 6275599 B1.

The applied reference has a common assignee (International Business Machines) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

As per claim 1, Adler teaches:

a contents data (col. 4, ll. 35-37, col. 6, ll. 23-32) dividing means for dividing at least part of said contents data into a plurality of first blocks; and a data filling means for filling (col. 4, l. 61-col. 5, l. 3) each of certain first embedding data (Special set S) to each of said divided first data blocks to generate a plurality of second d blocks (col. 6, ll. 34-38), said detection apparatus, comprising: a data extracting means (col. 5, ll. 52-53 , sets D,S are identified) for extracting said embedding data filled in (col. 7, ll. 42-43)each of at least a part of said second data blocks (second embedding data); and an alteration detecting means (col. 5, ll. 53-55, col. 7, ll. 51-56)

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for detecting whether or not alteration was added to each of at least a part of said second d blocks based on said extracted second embedding data.

As per claim 2, it recites the same limitations as claim 1 above except it is directed to image data instead of content data, which is taught by Adler, col. 6, ll. 23-32; therefore, the remarks above rejecting claim 1 are applicable to claim 2.

As per claim 3, Adler teaches:

said image dividing means divides said image data into said plurality of first image blocks containing a plurality of unit data respectively (col. 4, ll. 35-39); and said data filling means adjusts (col. 4, ll. 61-65) a relationship between or among a mutually corresponding plurality of said unit data values contained in each of mutually corresponding two or more of said first image blocks so that it represents said first embedding data according to a certain rule (besides special frequency, Adler teaches adjusting based on date, time and location, col. 5, ll. 1-5), filling said first embedding data to each of said plurality of first image blocks to generate said second image blocks (S blocks, col. 5, ll. 9-11).

In keeping with the examiners interpretation explained above in the 35 U.S.C. 112, second paragraph rejection of claim 4, Adler teaches:

wherein said data filling means, in the case that alteration was added to any of said second image blocks, adjusts said mutually corresponding plurality of unit data values contained in said second image blocks to which alteration was added so that said values do not comply with said certain rule (fig. 12, element 805, col. 7, ll. 50-55, where Adler teaches that the watermark is verified on a block by block basis, so it is inherent that Adler could tell which blocks were altered.

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As per claim 5, Adler teaches:

wherein said data extracting means extracts as said second embedding data, from each of said plurality of second image blocks, the data represented by the relationship (fig. 12, element 802) between or among said plurality of unit data values contained in each of said second image blocks according to a certain rule (fig. 12, 805).

As per claim 6, Adler teaches:

wherein said alteration detecting means detects whether alteration was added to each of said second image blocks or not based on results of comparison between said embedded first embedding data and said extracted second embedding data (fig. 12, element 805).

As per claim 7, Adler teaches:

wherein said first image blocks and said second image blocks are conversion blocks that contain said unit data , and also contain one or more sets of conversion coefficients acquired by dividing image data into certain processing blocks and converting it from a space area into a frequency area, respectively (col. 3, ll. 6-11 and col. 4, ll. 37-52).

As per claim 8, it recites substantially the same limitations as claim 7 above and analogous remarks apply because the specification defines unit data as DCT coefficients.

As per claim 9, it recites broad limitations of an image dividing means and a data filling means that are substantially the same as the limitations addressed in claims 1 and 2 above and analogous remarks apply.

As per claim 10, it recites broad limitations of an image dividing means, a data filling means and the adjusting relationships feature that are substantially the same as the limitations addressed in claims 1, 2 and 3 above and analogous remarks apply.

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As per claim 11, it recites substantially the same limitations as claim 4 above and analogous remarks apply.

As per claim 12, it recites broad limitations of an alteration detection means and a data extracting means that are substantially the same as the limitations addressed in claims 1 and 2 above and analogous remarks apply.

As per claim 13, it recites broad limitations of an image dividing means and a data extracting means that are substantially the same as the limitations addressed in claims 3 and 5 above and analogous remarks apply.

As per claim 14, it recites broad limitations of the content alteration detection means and "in the case that alteration was added" feature that are substantially the same as the limitations addressed in claims 1 and 4, respectively, above and analogous remarks apply.

As per claim 15, Adler teaches:

an altered position indication means for indicating the positions occupied by said second image blocks of which added alteration was detected (col. 7, ll. 50-56).

As per claim 16, it recites substantially the same limitations as claim 1 above and analogous remarks apply.

As per claims 17, 18 and 19, it recites substantially the same limitations, but broader limitations, or a combination of the limitations as claim 2 above and analogous remarks apply.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following U.S. patent(s) refer(s) to specifically identifying the areas of alteration:

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Wong, 6504941 B2, Shimizu, 6304966 B1 and Shimizu et al., 6005936 B1 and Kawakami et al., 5652626.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Miller whose telephone number is (703) 306-9134. The examiner can normally be reached on Monday-Friday, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MEM
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May 25, 2003


AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER